ON GRANITE.

Devon and Cornwall.—The moorstone or granite of this country that is wrought for sale not only at this place (Lanlivery, Cornwall), but every where that I have had an opportunity of observing it, is not produced from quarries, but lies in pieces, generally roundish, upon the surface of the earth, somewhat sunk into the same; and this is used in preference, as being most easy to come at; but the miners find that it lies underground in very thick and solid strata. It is here called moorstone, from its being generally found upon the high grounds in this country. At Lanlivery I saw one stone, apparently without crack or flaw, which curiosity prompted me to measure, and I found it to contain not less than 400 tons.

I found the moorstone, which in reality is the true granite, worked nearest to Plymouth, up the River Tamer, near Calstock, to which place I understood the river to be navigable. The moorstone is found upon Kingstone Downs, and here I first saw it worked, which was by splitting with a great number of wedges applied to holes or notches, cut in the surface of the stone at the distance of about four inches, more or less, according to the size and supposed strength of the mass. These holes are sunk with the point of a pick, much in the way that is done for the splitting of hard quarry stone. Here I was informed that the harder the quality of the moorstone, the more exactly, in general, would it split to the size or scantling required; and, on the contrary, that the more soft or capable of being worked with the pick or other tool, the less regularly it would split; so that to bring this kind of stone to a true square would require in the whole near the same quantity of labour, whether of the harder or softer species. The moorstone of this place seemed to be of the harder kind, but of the quantity remaining the stones did not appear of the size I expected to have met with.

In inquiring as to the prices of work, I foresaw it would be to no purpose to ask the expense of shaping stones to the particular figure I wanted, because the workmen, being totally unused to any work of that sort, the question would only have puzzled them, and the answer, of course, would at best have been indistinct, if not tending to mislead; I therefore founded my inquiries upon the price at which they could produce *Ashler*, by the foot superficial, when brought to a true square, and what was their price per gallon in forming stone *troughs*, some of which I found they were in the practice of making. By answers to the first, I was enabled to form a judgment at what price they could work moorstone by the foot, to a perfect regularity, after it was split into the proper scantlings for that purpose; and from the price of working out the hollows of stone troughs, I could judge of the expense of hollowing out the work by dint of downright labour with the pick, where no advantage could be derived from the use of the wedge or the hammer.

The operation of splitting granite is very curious; for the apparent texture being without any particular direction, the parts seeming to be irregularly and coarsely huddled together, somewhat resembling a *plum pudding*, one would not imagine that any degree of regularity could take place in their division by splitting; but the case is so far otherwise, that gate-posts are afforded in the rough square at a very moderate price; and I have, in this country, frequently seen posts of granite, 12 feet long, and not above 8 inches square, used instead of wood for the mere purpose of supporting a *hovel*, no part of them being so much as an inch out of the straight or flat; but it is to be constantly observed, that the strength of the stone, on each side of the bisection, is so managed as to be nearly equal, otherwise the *split* will constantly encroach upon the weaker side. Indeed, without this remarkable property in granite of splitting regularly, it would be little use in human life; for it is of so hard a nature that steel will not *cut* it; and yet hard steel will *bruise* it; so that the prominent parts being gradually crumbled away by repeated blows, its surface can be brought to a great degree of regularity; and as the splitting procures plain surfaces, nearly regular, as already the accidental prominences can be reduced to regularity by a moderate degree of labour.

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Next morning went on horseback to *Constantine*, a place about four miles from Falmouth, where I applied to Mr. Matthew Boz, to whom I had been directed as the principal and almost only man for moorstone in these parts. The stone here appeared to be of a quality better both to cleave and work than any I had before seen; for I observed by a piece of it then under the hands of Mr. Boz, that it might be cut and formed with a much superior degree of execution than I had before conceived this sort of stone to be capable of. He was at this time executing a *grave stone* of the elevated kind, of which the pedestal of a column gives the idea, and in which he had formed the mouldings with so much delicacy and propriety, that I could not help considering Mr. Boz as a capital artist in that kind of material; and therefore felt a secret joy in meeting with him. Such, however, is the nature of man, that he may be great in one branch of his profession, and remain small in another; so on communicating the nature of my design to him, I quickly found that he considered *the forming and erecting of a well-shaped tomb-stone of granite as the greatest of all human performances;* and that having lived and been brought up in a retired part of the country, from whence there had never been any great demand for moorstone, in point of quality, he had chiefly applied himself to finishing of smaller works for gentlemen of the country, within a moderate distance of him. He seemed, therefore, rather *frightened* than *pleased* when, after I had explained a little of the nature and form of the work I should be likely to need, I mentioned the extensive order that I might possibly give for this article. For the execution of it he formed numerous difficulties, and did not know what to ask either for the stone, his work, or the carriage down to Falmouth. On considering the result of this interview with Mr. Boz, and having examined all the localities I could hear of where moorstone was worked, and would lie tolerably convenient for water carriage, I became convinced of the necessity of making use of Portland or some other free-working stone for the inside work.

The foregoing remarks are extracted from one of the most interesting works ever published in the annals of engineering—we mean Smeaton's report and description of the Eddystone Lighthouse. The granite there referred to is of the same district to which our remarks in a previous number had reference. Foggin-Tor is that quarry to which all the experiments of Smeaton, and the subsequent ones of individuals and companies, have led to a conclusion of preference. Smeaton's description of the manner of working, and of the quality of the material, would very well answer for our purpose now, but we can and may enlarge upon it. The shrewdness of that great man, devoid of all complexion of *cunning*, is fully exemplified in his account of the way by which he arrived at a knowledge of the value of labour in granite-working; but it may excite a smile even now among those whom long habit, growing out of his enterprise, has rendered familiar with a standard of prices. Amongst the hardy men of Devon, quarry-working and granite-dressing is now a sort of child's-play, and the economy equal, or almost equal, to that of a soft free-stone. The difficulties of procuring workmen, large blocks of stone, and an abundant supply, with all which *poor* Smeaton had to contend, and on account of which he was driven to adopt a filling-in to his structure of an inferior material, are now, thanks to the enterprise of our London merchants, done away with. The engineers and builders of the present day might justly hold a Saturnalia in honour of Smeaton and his followers, who have thus opened out to them so extended a field of advantageous working.

The character drawn out in Mr. Boz is one to be studied with advantage; it is a portrait to the life, and Smeaton a very Vandyke or a Lawrence for the painting. There are many of the *Messieurs Boz* still remaining, and who would overrule a Smeaton, if a Smeaton *could* submit to their rule. We dare say Mr. Boz was not only *frightened*, but shocked at the temerity of the great engineer; perhaps not a little astounded at the presumption that could call in question his sagacity, or presume to dictate to his experience. We dare say, also, he dismissed THE *Smeaton* with a grave shake of the head, and retired to meditate in all complacency on his own superior profundity. Oh! for one Smeaton in architecture in our day, to save us from a thousand Boxes!

NEW SCHOOLS.

THE Wesleyans propose to apply a fund of 200,000*l.* to provide a grand system of schooling throughout the kingdom. Three-fourths of the sum will be spent in the buildings; in fact, it is said to be their intention to build 700 schools! It may appear a small sum, however, to devote to each school, including site and furniture; yet much may be done with an average of 230*l.* to 240*l.* each. Let us hope that some attention will be paid to the architecture of these structures; a good model will be of more consequence than many of the lessons taught in the schools. We do not attach importance enough to the material auxiliaries in the matter of education. A correct building promotes and forms correct impressions; in fact, you may from a building form a pretty correct estimate of the merits of that for which it is set up, and by whom it is set up. As the *Old Play* has it, "Let me see Mrs. Jago's hand-writing, that I may judge of her temper," may with more force be applied to building,—"Let us see the *Messrs. Wisley's* head work, that we may judge of their hearts?"

Seven years are proposed to be occupied in the work. Two additional schools to be raised in each circuit, one for the town and the other for the village population. Immense must be the influence of this and similar movements on the character of the future world.

NEW CHURCHES.

Tottenham.—A new church is being erected at Clay Bush Hill, Wood-green, in the parish of Tottenham. It is in the Gothic style, and constructed of Kentish rags and a stone found in the neighbourhood of Tunbridge Wells. Its length will be about 77 feet, and its width 25 feet. It is expected that the building will be completed by Christmas.

Aberdeen.—On Thursday, the 16th inst., the new church at Cruden, near Aberdeen, was consecrated by the Bishop of the diocese. It is built in the early English style, having long, narrow, lancet windows, with alternate buttresses, and a spire about 90 feet high, which, from its elevated position, is seen from a great distance both by sea and land.

IMPROVEMENTS IN WESTMINSTER.—Workmen are busily engaged in pulling down the houses in the vicinity of Buckingham Palace, leading from James-street into the Pimlico-road, to make way for the new improvements. The houses in Tothill-street, York-street, and Castle-lane, Westminster, are also to be pulled down in the spring, as well as Sion College Almshouses, for the new road, which will run across the ground of Elliott's brewery into the Vauxhall-road. On the site of the old buildings, some splendid houses are to be erected, equal to those at the West-end. The Rookery, which for several centuries has been the Westminster nuisance, being the refuge of the cadgers of London, and the most profligate characters, is at length to be cleared away, and a square will be built on the spot. One of the greatest improvements in the city of Westminster is the proposed embankment of the Thames, by having a public roadway or communication from or near Whitehall-place, along the side of the Thames, on the Middlesex side, as far as Chatham-place, Blackfriars. An embankment is to be made from Westminster-bridge to the northern pier of the new Hungerford Suspension-bridge, and thence to Blackfriars, forming excellent quays, and a public promenade similar to those on the banks of the Seine at Paris. Stone landing-places for the convenience of passengers are to be erected at the bottom of Essex-street, Arundel-street, Norfolk-street, Surrey-street, the Savoy, Villiers-street, leading into the Strand. The quays will be built upon arches, so as not to impede the barges and the great traffic carried on at the different wharfs at this part of the river. Several old houses will be pulled down in the neighbourhood of these improvements.

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